

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H03D13/00 H03L7/089

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H03D H03L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/031028 A1 (VAUCHER CICERO SILVEIRA) 18 October 2001 (2001-10-18) paragraph '0024! - paragraph '0031!; figures 2-5a	1,8-11
X	SAVOJ J ET AL: "Design of half-rate clock and data recovery circuits for optical communication systems" PROCEEDINGS OF THE 38TH. ANNUAL DESIGN AUTOMATION CONFERENCE. (DAC). LAS VEGAS, NV, JUNE 18 - 22, 2001, PROCEEDINGS OF THE DESIGN AUTOMATION CONFERENCE, NEW YORK, NY : ACM, US, vol. CONF. 38, 18 June 2001 (2001-06-18), pages 121-126, XP010552368 ISBN: 1-58113-297-2	1,8-11
A	page 122, column 2.2.2 - page 125, column 3.2.2.; figures 4-11	2-7
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

23 July 2004

Date of mailing of the international search report

29/07/2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/135400 A1 (LIU HUNG-CHIH ET AL) 26 September 2002 (2002-09-26)	1,8-11
A	paragraph '0007!; figures 2,3 paragraph '0019! - paragraph '0025! -----	2-7
A	US 5 619 171 A (RIJCKAERT ALBERT M A ET AL) 8 April 1997 (1997-04-08) figures 2,6 -----	1-11
A	US 5 712 580 A (BAUMGARTNER STEVEN JOHN ET AL) 27 January 1998 (1998-01-27) cited in the application column 2, line 34 - column 3, line 48; figure 1 -----	1-11

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 2001031028	A1	18-10-2001	WO	0167612 A1		13-09-2001
			EP	1183781 A1		06-03-2002
			JP	2003526984 T		09-09-2003
US 2002135400	A1	26-09-2002	TW	474064 B		21-01-2002
US 5619171	A	08-04-1997	EP	0741931 A1		13-11-1996
			WO	9610296 A1		04-04-1996
US 5712580	A	27-01-1998	NONE			